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BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2013-14/

1. TESTING OF COARSE AGGREGATES (40 mm): **Date: 17-05-2013**

Sub: Testing of Coarse Aggregates.

{Name of Work*: Improvement to Road from Lakshmipura Main Road to Singapura in Shettyhalli Sub-Division , in Ward No.12 }

Ref: Letter No. BBMP/AEE/SSD/DZ/PR/13-14, dated 14-05-2013.
{ Work order No.EE/DD/WO/104/12-13, DATE:14/09/2012 of Executive Engineer, Dasarahalli Division.
Job Code: 012-12-000049}

Report Required for : Assistant Executive Engineer,
Shettyhalli ,Sub-Division,
BBMP, Bangalore.

Sample supplied to lab by: Karnataka Rural Infra Structure Development Limited , Bangalore.

Table - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2002) % Passing	
	40 mm Sample	*Single size*	*Graded*
40mm	96.00	85-100	95 – 100
20mm	36.00	0 -20	30- 70
10mm	14.00	0 -5	10- 35
4.75mm	Nil	------	0 - 5

TABLE 1 2 :

SL No	Test conducted	Sample No	Results	**Requirements** as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2002)
1.	Flakiness Index	As above	13.00 %	Not to exceed 25 %
2.	Crushing value	----,,----	25.60 %	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

*As Furnished by Client.

The Results relate only to the items tested.

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BUB/CTE/2013-14/

1. TEST REPORT ON CEMENT:

Date: 22-05-2013

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Name of Work*: Improvement to Road from Lakshmipura Main Road to Singapura in Shettyhalli Sub-Division , in Ward No.12 }

Ref: Letter No. BBMP/AEE/SSD/DZ/PR/13-14, dated 14-05-2013.
{ Work order No.EE/DD/WO/104/12-13, DATE:14/09/2012 of Executive Engineer, Dasarahalli Division.
Job Code: 012-12-000049}

Report Required for : Assistant Executive Engineer,
Shettyhalli ,Sub-Division,
BBMP, Bangalore.

Sample supplied to lab by: Karnataka Rural Infra Structure Development Limited , Bangalore.

PHYSICAL TESTS ON CEMENT

Brand* : Birla Super
Grade * : 53
Type * : OPC
Date : 14-05-2013 to 21-05-2013

SL No	Name of Test	Results	Requirements as per
		Cement Sample	IS 12269-1987
1	Initial setting time	130 min	Shall not be less than 30 min
2	Final setting time	220 min	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	2.38 %	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	1.50 mm	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results) b) 7 days (average of three results)	28.30 N/ Sq mm 42.60 N/Sq mm	Shall not be less than 27 N/Sqmm Shall not be less than 37N/Sqmm

*As Furnished by Client.

The Results relate only to the items tested.

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BUB/CTE/2013-14/

1. TESTING OF FINE AGGREGATES : **Date: 20-05-2013**

Sub: Testing of Fine Aggregates.

{Name of Work*: Improvement to Road from Lakshmipura Main Road to Singapura in Shettyhalli Sub-Division , in Ward No.12 }

Ref: Letter No. BBMP/AEE/SSD/DZ/PR/13-14, dated 14-05-2013.
{Work order No.EE/DD/WO/104/12-13, DATE:14/09/2012 of Executive Engineer, Dasarahalli Division.

Job Code: 012-12-000049

Report Required for : Assistant Executive Engineer,
Shettyhalli ,Sub-Division,
BBMP, Bangalore.

Sample supplied to lab by: Karnataka Rural Infra Structure Development Limited , Bangalore.

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -III	
04.75	97.80	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	86.00	60-95	75-100	85-100	
01.18	74.50	30-70	55-90	75-100	
600. mic	38.00	15-34	35-59	60-79	
300.mic	17.60	5-20	8-30	12-40	
150.mic	2.80	0-10	0-10	0-10	

TABLE 1.2 ;

Sl No	Test Conducted	Sample	Results	Requirements as Per IS. Specification IS :383-1970 (Reaffirmed 2002)
1	Silt Content	001	1.20 %	Not more than 8%
2	Specific Gravity	----	2.62	-------

*As Furnished by Client.

The Results relate only to the items tested.

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BUB/CTE/2013-14/ **Date: 17-05-2013**

1. TEST REPORT ON REINFORCEMENT STEEL :

Sub: Testing of Reinforcement Steel of diameter 10mm.
{Name of Work*: Improvement to Road from Lakshmipura Main Road to Singapura in Shettyhalli Sub-Division , in Ward No.12 }

Ref: Letter No. BBMP/AEE/SSD/DZ/PR/13-14, dated 14-05-2013.
{ Work order No.EE/DD/WO/104/12-13, DATE:14/09/2012 of Executive Engineer, Dasarahalli Division.
Job Code: 012-12-000049}

Report Required for : Assistant Executive Engineer,
Shettyhalli ,Sub-Division,
BBMP, Bangalore.

Sample supplied to lab by: Karnataka Rural Infra Structure Development Limited , Bangalore.

TABLE – 1

SL No	Details	For 10 mm	
		Test Results	Min. Req as per IS 1786-2008
01	Observed diameter of bar	10.0mm	10.0mm
02	Observed Wt/m Length **Kg/m**	0.625	0.617
03	Proof stress/Yield stress, fy , **N/mm^2**	562.0	500.0
04	Bend/ Re bend Test	Ok	---
05	Percentage of Elongation, %	18.00	12.00
06	Ultimate Tensile Strength **N/mm^2**	632.0	545.0

*As Furnished by Client.
The Results relate only to the items tested.

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BUB/CTE/2013-14/ **DATE: 26-09-2013**

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes for 28 days Compressive Strength
{Name of Work*: Improvement to Road from Lakshmipura Main Road to Singapura in Shettyhalli Sub-Division , in Ward No.12 }
Ref: Letter No. BBMP/AEE/SSD/DZ/PR/13-14, dated 25-09-2013.
{ Work order No.EE/DD/WO/104/12-13, DATE:14/09/2012 of Executive Engineer, Dasarahalli Division.
Job Code: 012-12-000049}
Report Required for : Assistant Executive Engineer,
Shettyhalli ,Sub-Division,
BBMP, Bangalore.
Sample supplied to lab by: Karnataka Rural Infra Structure Development Limited , Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M_{20}

TABLE 1.1 :

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	28-08-13	25-09-13	28	22500	560	24.88	**24.22**
	002	"	"	"	"	525	23.33	
	003	"	"	"	"	550	24.44	

*As Furnished by Client.
The Results relate only to the items tested.

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